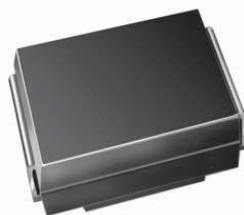


High Current Density Surface Mount Schottky Rectifier



DO-214AA (SMB)

FEATURES

- Guardring for overvoltage protection
- Low profile package
- Ideal for automated placement
- Low power loss, high efficiency
- Very low forward voltage drop
- High surge capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT

TYPICAL APPLICATIONS

For use in low voltage, high frequency inverters, freewheeling, DC/DC converters, and polarity protection application.

PRIMARY CHARACTERISTICS

| | |
|------------------------|--------|
| $I_{F(AV)}$ | 3.0 A |
| V_{RRM} | 40 V |
| I_{FSM} | 100 A |
| V_F at $I_F = 3.0$ A | 0.34 V |
| T_J max. | 150 °C |

MECHANICAL DATA

Case: DO-214AA

Molding compound meets UL 94V-0 flammability rating
Base P/N-E3 - RoHS-compliant, commercial grade

Terminals: Matte tin plated leads, solderable per J-STD-002 and JESD 22-B102

E3 suffix meets JESD 201 class 1A whisker test

Polarity: Color band denotes cathode end

MAXIMUM RATINGS ($T_A = 25$ °C unless otherwise noted)

| PARAMETER | SYMBOL | B340LB | UNIT |
|--|----------------|---------------|------------|
| Device marking code | | B34 | |
| Maximum repetitive peak reverse voltage | V_{RRM} | 40 | V |
| Maximum RMS voltage | V_{RMS} | 28 | |
| Maximum DC blocking voltage | V_{DC} | 40 | |
| Maximum average forward rectified current at T_L (Fig.1) | $I_{F(AV)}$ | 3.0 | A |
| Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load | I_{FSM} | 100 | |
| Voltage rate of change (rated V_R) | dV/dt | 10 000 | V/ μ s |
| Operating junction and storage temperature range | T_J, T_{STG} | - 65 to + 150 | °C |

**ELECTRICAL CHARACTERISTICS** ($T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise noted)

| PARAMETER | SYMBOL | TEST CONDITIONS | TYP. | MAX. | UNIT |
|---------------------------------------|-------------|-----------------|-------------------------------------|------|------|
| Maximum instantaneous forward voltage | $V_F^{(1)}$ | 3.0 A | $T_J = 25\text{ }^{\circ}\text{C}$ | 0.43 | V |
| | | | $T_J = 125\text{ }^{\circ}\text{C}$ | 0.34 | |
| Maximum reverse current at | $I_R^{(2)}$ | Rated V_R | $T_J = 25\text{ }^{\circ}\text{C}$ | - | mA |
| | | | $T_J = 125\text{ }^{\circ}\text{C}$ | 26 | |

Note(1) Pulse test: 300 μs pulse width, 1 % duty cycle(2) Pulse test: Pulse width $\leq 40\text{ ms}$ **THERMAL CHARACTERISTICS** ($T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise noted)

| PARAMETER | SYMBOL | B340LB | UNIT |
|----------------------------|-----------------|--------|----------------------|
| Typical thermal resistance | $R_{\theta JA}$ | 70 | $^{\circ}\text{C/W}$ |
| | $R_{\theta JL}$ | 25 | |

ORDERING INFORMATION (Example)

| PACKAGE | PREFERRED P/N | UNIT WEIGHT (g) | PACKAGE CODE | BASE QUANTITY | DELIVERY MODE |
|----------------|---------------|-----------------|--------------|---------------|----------------------------|
| DO-214AA (SMB) | B340LB-E3/52T | 0.096 | 52T | 750 | 7" diameter tape and reel |
| DO-214AA (SMB) | B340LB-E3/5BT | 0.096 | 5BT | 3200 | 13" diameter tape and reel |

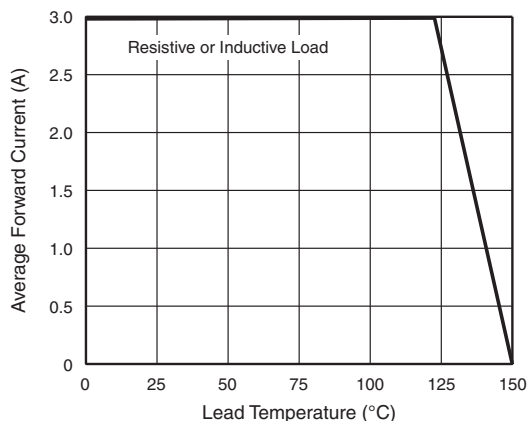
RATINGS AND CHARACTERISTICS CURVES($T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise noted)

Fig. 1 - Forward Current Derating Curve

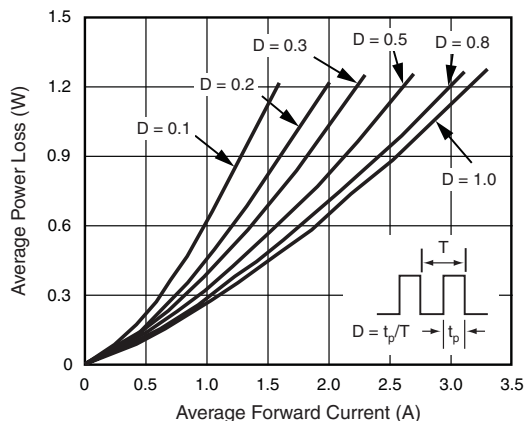


Fig. 2 - Forward Power Loss Characteristics

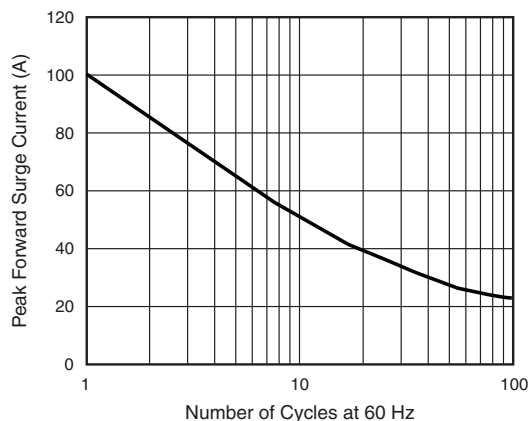


Fig. 3 - Maximum Non-Repetitive Peak Forward Surge Current

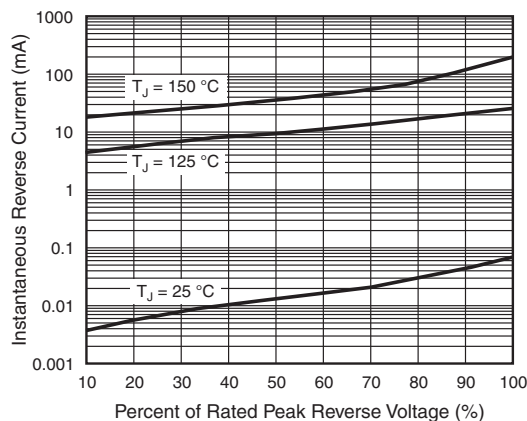


Fig. 5 - Typical Reverse Characteristics

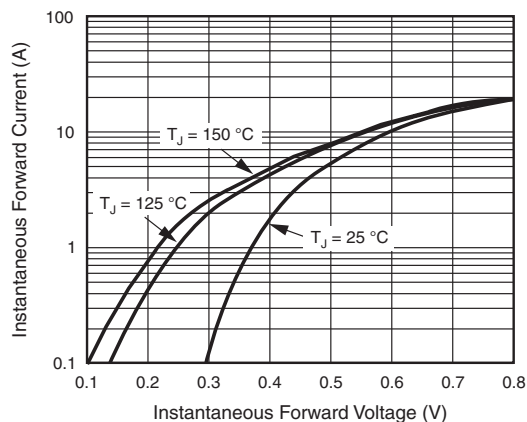


Fig. 4 - Typical Instantaneous Forward Characteristics

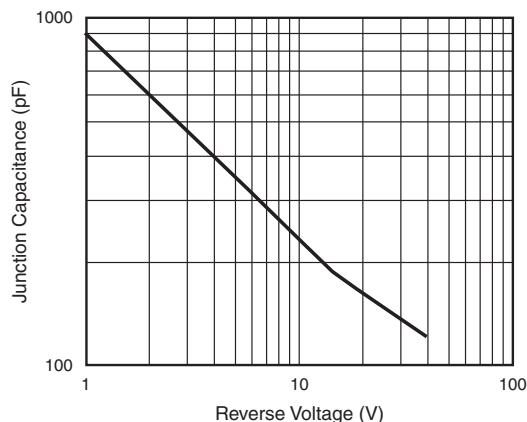
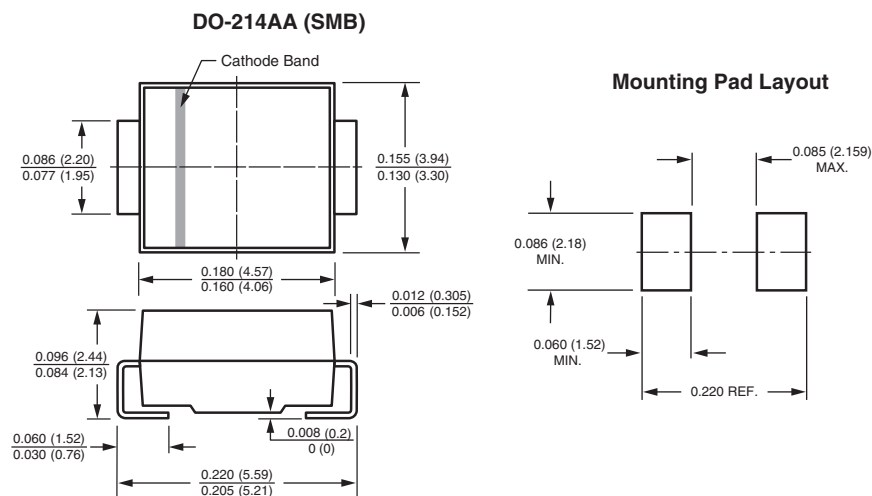


Fig. 6 - Typical Junction Capacitance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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